U. S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

I. HEADING

Date: June 2, 2000

Subject: Monroe Township Groundwater Contamination Site, Williamstown, Gloucester County, New Jersey

From: Chaitanya Agnihotri, On-Scene Coordinator
James S. Haklar, On-Scene Coordinator
Removal Action Branch

To:

R. Salkie, EPA
T. Johnson, 5202G
B. Dease, 2ERRD-RAB
B. Bellow, 2CD
P. Seppi, 2CD
G. Lipsius, NJDEP
D. Durack, 2DECA-WCB
G. Zachos, EPA 2ERRD
A. Block, ATSDR
A. Raddant, DOI
W. Atkinson, GCHD
START
J. Rotola, EPA, 2ERRD-RAB
R. Cahill, 2CD-PAT
T. Riverso, 2OPM-GCMB
K. Guarino, 2CID
D. Karlen, 2ORC-NJSFB
W. Andrews, 2DEPP-WPB
R. Byrnes, EPA, 2OIG
J. Smolenski, NJDEP
D. Sweeny, NJDEP
G. Vandeberg, NOAA
M. Duffy, Township of Monroe

POLREP NO.: 5 (Covers period from 04/01/00 to 05/26/00)

II. BACKGROUND

Site No.:	MQ
Delivery Order Number:	003 (ERRS Contract No. 68-S2-99-07)
Response Authority:	CERCLA
NPL Status:	Non-NPL
CERCLIS Number:	NJD98079699
Action Memo Status:	Action Memo approved December 6, 1999
Start Date:	September 21, 1999
Demobilization Date:	----
Completion Date:	----

III. RESPONSE INFORMATION

A. Incident Category

CERCLA incident category: Area-Wide Groundwater Contamination

B. Site Description

1. Site Location

The Site is located in the town of Williamstown, in the Township of Monroe, and consists of properties which use private wells as a source of potable water. The affected properties are located in three areas identified as the Winslow Road Area (including properties on Winslow Road and Maple Street); the Tuckahoe Road Area (consisting of properties on Tuckahoe Road, Sykes Lane and Glassboro Road) and the Black Horse Pike Area (including properties on Black Horse Pike).

2. Description of Threat

EPA became aware of groundwater contamination of private wells in Monroe Township while evaluating groundwater contamination associated with the Township's municipal supply wells. During EPA's evaluation of these municipal wells, the Agency obtained groundwater sampling data from the Gloucester County Health Department (GCHD), which indicated that certain private wells in the Township were contaminated with PCE. In addition, based on discussions with the New Jersey Department of Environmental Protection (NJDEP) and the U.S. Geological Survey (USGS), EPA became aware of groundwater contamination problems in the Township that were associated with Mercury.

C. Preliminary Assessment/Site Inspection Results

In cooperation with both the NJDEP and the GCHD, EPA selected three areas of Monroe in which to perform tap water sampling of private wells. This sampling was performed to assess whether the site could be eligible for a removal action, and to determine whether the Site should be proposed for inclusion on the National Priorities List (NPL). These areas were determined based on the locations of previously known elevated concentrations of PCE, and included properties in the areas of the South Black Horse Pike, Winslow Road, and the area located in the vicinity of the intersection of Tuckahoe Road with Glassboro Road. The tap water sampling event was performed in July 1999, with approximately 100 homes being sampled. Of these 100 homes, it was found that 29 properties exceeded the federal maximum contaminant levels (MCLs) and removal action levels (RALs) for PCE, Benzene, Mercury, Thallium, Copper, and Lead.

IV. RESPONSE INFORMATION

A. Situation

1. Current Situation

As described above, EPA determined that there were 29 properties at which the tap water exceeded the RALs and MCLs for PCE, Benzene, Mercury, Thallium, Copper, and Lead. A summary of these exceedances is provided in the following table:

Monroe Township Groundwater Contamination Site

MAXIMUM CONCENTRATIONS OF CONTAMINANTS FOUND IN RESIDENTIAL WELLS (ppb)		EPA RAL (ppb)	EPA MCL (ppb)
PCE	1,500	70	5
Benzene	470	100	5
Mercury	19.9	10	2
Copper	3,260	1,300	TT*
Lead	62.6	30	TT*
Thallium	4.0	2	2

* TT - Treatment Technique, as per the Safe Drinking Water Act.

2. Removal Actions to Date

EPA has continued providing bottled water to the homeowners of the following list of impacted homes which have lead contamination:

739 Glassboro Road
3331 South Black Horse Pike (a POET system is currently treating the mercury)
969 Sykes Lane
1031 Sykes Lane
1132 Tuckahoe Road
430 Winslow Road
465 Winslow Road

On March 20 and 21, 2000, EPA's Emergency Rapid Response Services (ERRS) Contractor (WRSI&E) collected samples from the 15 residences which had POET treatment systems installed in November or December 1999. These samples will be analyzed for PCE, mercury, and/or benzene.
The week of January 10, 2000, EPA and the Superfund Technical Assessment

and Response Team (START) contractor collected additional samples from 87 residences. On March 15, 2000, EPA received the validated data from this sampling event. The following is a list of the residences which contained contamination of mercury, cadmium, thallium, and/or PCE above the acceptable EPA drinking water guidelines:

2745 South Black Horse Pike	mercury - 7.6 ug/L
2898 South Black Horse Pike	cadmium - 6.6 ug/L
2924 South Black Horse Pike	mercury - 17.9 ug/L
3194 South Black Horse Pike	mercury - 9.3 J ug/L
	PCE - 130 ug/L
2833 South Black Horse Pike	mercury - 8.5 ug/L
2779 South Black Horse Pike	mercury - 15.8 ug/L
125 Concord Drive	thallium - 5 B ug/L
171 Sikorski Road	mercury - 23.8 ug/L

These residences were notified by EPA about the contamination in their drinking water, and bottled water was delivered to them within a week. On Tuesday March 21, 2000, WRSI&E obtained the services of Shockey's Water Treatment System Company to install point of entry treatment systems (POETs) (consisting of pH adjustment and a KDF-55 unit) at the three of the residences with only mercury contamination (these were 2745 South Black Horse Pike, 2924 South Black Horse Pike, and 171 Sikorski Road).

The residence at 3194 South Black Horse Pike consists of 6 residences, so a larger POET treatment system had to be designed to be able to treat the additional volume of water consumed at this property. On April 19, 2000 a POET treatment system was installed in house 3194B South Black Horse Pike. The POET system consisted of a large pH adjustment tank, two KDF-55 units, and four GAC carbon units.

The residences with cadmium (2898 South Black horse Pike) and thallium (125 Concord Drive) contamination were resampled in March 21, and March 24, 2000, respectively, to confirm the presence of these contaminants. The cadmium results (not detected at the detection limit of 1.0 ppb) indicated that the water at 2898 South Black Horse Pike was not contaminated with cadmium. The thallium results (not detected at the detection limit of 1.6 ppb) indicated that the water at 125 Concord Drive was not contaminated with thallium. Both residences were taken off bottled water.

The following is a list of the residences which contained contamination of lead above the acceptable EPA drinking water guidelines:

1309 Corkery Lane	lead - 25.3 ug/L
1322 Corkery Lane	lead - 52.7 ug/L
1327 Corkery Lane	lead - 15.8 ug/L
1373 Corkery Lane	lead - 105 ug/L
739 Glassboro Road (sampled to reconfirm lead contamination)	
First draw sample	lead - 47.2 ug/L
After purging	lead - 119 ug/L
661 New Street	lead - 18.6 ug/L
517 Roun Avenue	lead - 45.7 ug/L
2712 South Black Horse Pike	lead - 25.5 ug/L
3358 South Black Horse Pike	lead - 19.4 ug/L
3497 South Black Horse Pike	lead - 43.1 ug/L

These residences were also notified, and they will be provided with bottled water until EPA completes additional testing to verify the source of the lead.

On March 24, 2000, WRSI&E collected samples from the three residence (171 Sikorski Road, 2924 South Black Horse Pike, and 2745 South Black Horse Pike) which had POET treatment systems installed on March 21, 2000.

The data from the January 2000 sampling event was reviewed, and letters with these results were submitted to each homeowner.

The week of March 27, 2000, EPA and START personnel sampled the following residences which have lead contamination to determine if the lead is coming from the pressure tank, valves, and/or piping system:

1309 Corkery Lane	2 water samples and a metal filing sample of the tank.
3331 SBHP	2 water samples and a metal filing sample of the tank.
969 Sykes Lane	2 water samples, and no metal filing sample was collected.
1132 Tuckahoe Road	2 water samples and a solder joint filing sample and metals filing sample of the tank.
430 Winslow Road	2 water samples and a metal filing sample of the tank.
465 Winslow Road	2 water samples and a metal filing sample of the tank.

The above samples will be analyzed by Rutgers University for lead speciation analysis to verify if the lead in the water samples came from the pressure tank, valves, and/or piping system. The results from these tests will be available in early June 2000.

The week of March 27, 2000, the following residences were resampled for mercury:

3134 South Black Horse Pike

3154 South Black Horse Pike
3799 South Black Horse Pike

The mercury results (not detected at the detection limit of 0.2 ug/L) from the resampling indicated that the water at 3134 South Black Horse Pike and 3154 South Black Horse Pike did not contain mercury above the EPA drinking water standard of 2.0 ug/L. The mercury result from 3799 South Black Horse Pike was 7.7 ug/L which is above the EPA Drinking Water Standard. The owner was provided bottled water. On May 24, 2000 a POET system consisting of pH adjustment and a KDF-55 unit was installed at 3799 South Black Horse Pike.

The week of March 27, 2000, the water at 1108 Tuckahoe Road was sampled for TAL metals and VOCs. The results indicate that the water is not contaminated with any contaminant above the EPA Drinking Water Standards.

The week of March 27, 2000, the following residences were also sampled for TAL metals:

3331 South Black Horse Pike
430 Winslow Road

On April 20, 2000, POET treatment systems consisting of pH adjustment and a KDF-55 unit were installed at 2779 South Black Horse Pike and 2833 South Black Horse Pike.

On April 11, 2000, samples were collected at 2745 South Black Horse Pike, 171 Sikorski Road, and 2924 South Black Horse Pike. The results indicated the mercury was removed to below the EPA Drinking Water Standard, and the residences were taken off bottled water.

On May 2, 2000, samples were collected from 2779 South Black Horse Pike and 2833 South Black Horse Pike. The results indicated that the mercury is not being removed to below the EPA Drinking Water Standards. The pH adjustment is not increasing the pH to neutral which is required for the proper operation of the KDF unit. In early June EPA will upgrade the POET systems at these two residences to increase the pH to the proper range. These two residences will remain on bottled water until the mercury is removed from the water.

On May 2, 2000, samples were collected from 3194 South Black Horse Pike. Samples were collected from all sample ports in the 3194B residence. Samples were also collected from the kitchen sink at three of the other residences (3194A, 3194C, and 3194E). The results indicated that PCE and mercury were removed to below the EPA Drinking Water standards, and the residences were taken off bottled water.

Also, samples were collected from 3132 South Black Horse Pike because the results from the March 21, 2000 sampling event indicated the PCE was not being removed by the GAC carbon units. Therefore, bottled water was provided until the POET system could be verified to be removing all contamination. New GAC carbon units were installed in April 2000. The results after the May 2, 2000 sampling indicated that PCE and mercury were being removed from the groundwater, and residence was taken off bottled water.

The owner at 132 Corkery Lane installed their own pH adjustment and water softener. On May 19, 2000, START collected samples from 1322 Corkery Lane for lead analysis before and after the treatment system. The results indicate that the treatment system is lowering the lead concentration to below the EPA Drinking Water Standard of 15 ug/L. Therefore, this residence will be taken off bottled water.

3. Enforcement

No Federal enforcement action is in progress at this time. Should a responsible party or parties be identified and be willing to undertake a timely and appropriate removal action, then EPA will evaluate its options with regard to enforcement.

B. Planned Removal Activities

The planned removal activities consist of ensuring that the POET treatment systems are operating properly. EPA will conduct periodic sampling activities to verify the proper operation of the POET treatment systems and that the treatment criteria for the contaminants of concern are in compliance.

Also, bottled water will continue to be provided to properties where the MCLs and RALs for lead are exceeded, until such time that EPA can determine the sources of this contamination. The report by Rutgers University on the lead speciation within the six residences sampled is due in early June 2000.

Additionally, in late May 2000, WRSI&E will collect the initial samples after POET system installation from 3799 South Black Horse Pike.

In early June 2000, WRSI&E will make upgrades to the pH adjustment at 2779 South Black Horse Pike and 2833 South Black Horse Pike to ensure the removal of the mercury by the KDF units. Once this is completed, the WRSI&E will collect samples to verify the proper operation of the POET system at these two residences.

In mid-June 2000, WRSI&E will collect two-week samples from 3799 South

Black Horse Pike.

In June or July 2000, EPA plans to turn-over the maintenance and operation of the 22 POET systems installed to the NJDEP.

The data received from additional sampling events will be reviewed and submitted to the homeowners. Through the use of START, EPA will also be performing follow-up sampling of some of the residences previously sampled.

C. Next Steps

The next activities include the initial and the 2-week sampling of the water at 3799 South Black Horse Pike; upgrading the pH adjustment unit at 2799 South Black Horse Pike and 2833 South Black Horse Pike; and the collection of samples from these two residences to verify that mercury is adequately removed.

START will complete the maps (containing PCE and mercury concentrations) of the three areas of concern. START will complete the compilation of all data collected since July 1999.

D. Key Issues

There were no key issues during the reporting period covered by this Pollution Report.

V. COST INFORMATION (to 05/26/00)

	AMOUNT BUDGETED	COSTS TO DATE (rounded)	AMOUNT REMAINING
ERRS costs	$ 165,000	$ 65,000	$100, 000
START costs	$ 12,500	$ 12,500	$ --------
START contingency	$ 35,500	$ 5,500	$ 30,000
EPA costs	$ 34,000	$ 27, 000	$ 7,000
Total	$ 247,000	$110,0 00	$ 137, 000

The above accounting of expenditures is an estimate based on figures known to the OSCs at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

VI. DISPOSAL OF WASTES

This section is not applicable for the period addressed by this Pollution Report.